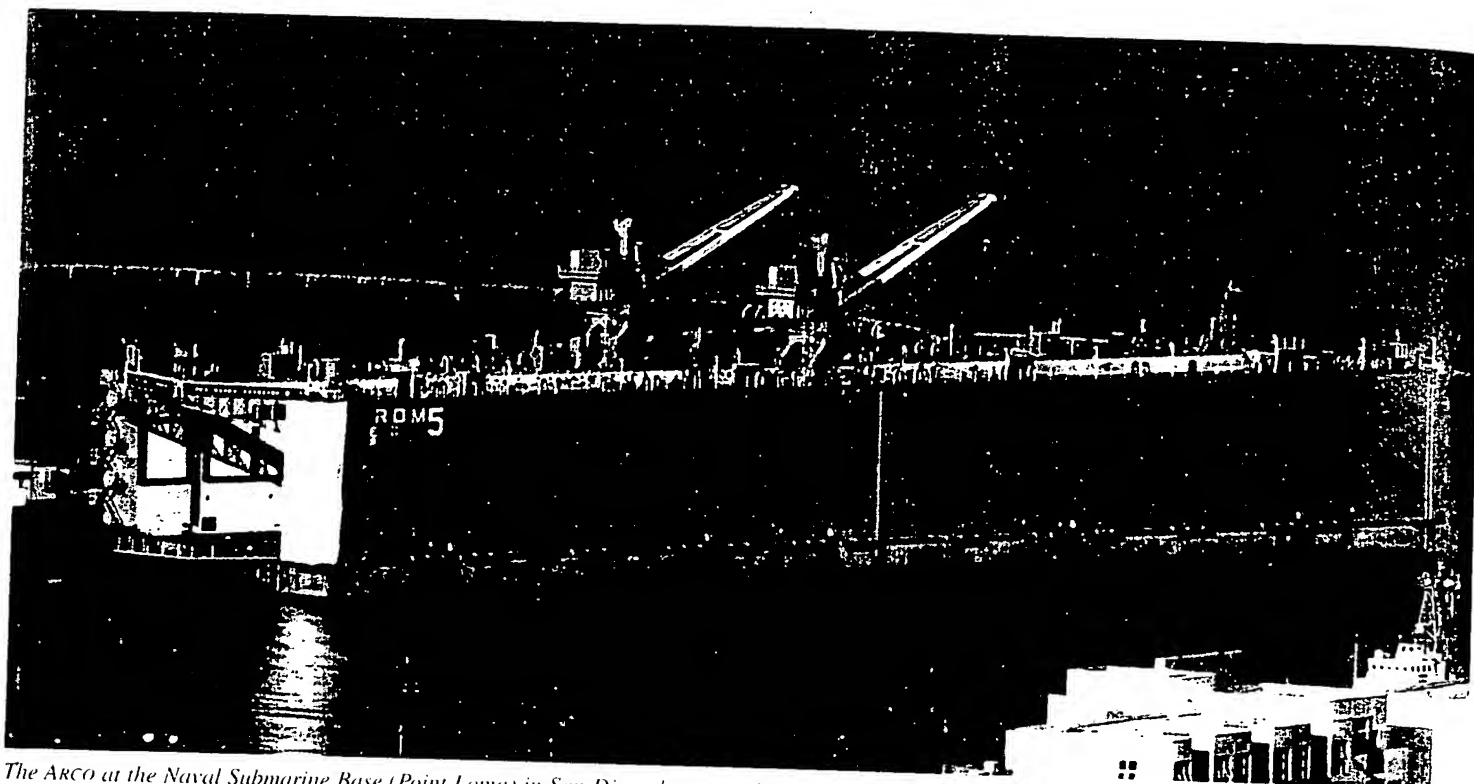


CHAPTER 26

BEST AVAILABLE COPY

Floating Dry Docks



The ARCO at the Naval Submarine Base (Point Loma) in San Diego has an unimposing appearance. Still, dry docks—military and civilian, floating and fixed—are vital to the support of the operating fleet. The two cranes ride on tracks atop the dock's sidewalls. (2004, W. Michael Young)

The Navy operates floating dry docks at several bases in the continental United States, primarily for the repair and maintenance of submarines. These are non-self-propelled docks, but they have electrical generators to provide power for their lighting, tools, and equipment. Normally they operate with a flotilla of non-self-propelled barges that provide specialized services, such as messing and berthing, for the docks themselves and for ships being dry-docked.

Like the Navy's ships and service craft, the number of dry docks has been reduced in the post-Cold War era. The floating docks in this chapter are arranged according to their classifications. The docks in active Navy service have their locations indicated; several others are on lease from the Navy and operated by commercial firms. One ex-Navy dock, the former OAK RIDGE (ARDM 1, ex-ARD 19) is in Coast Guard service.

Floating dry docks officially are considered to be service craft; they are listed in both the Naval Vessel Register (NVR) and the Service Craft and Boat Accounting Report (SABAR).

Classification: IX 521, 522, 524, and 525 were assigned to AFDB dock sections in 1996–1997. The rationale for this change has not been given by the Navy, but it relates to the extensive modification of the IX 524 as a mobile at-sea sensor platform.

Many existing U.S. floating dry docks were reclassified on 1 August 1946, several of which remain on the NVR:

<i>World War II</i>	<i>Post-1946</i>
ABSD	AFDB
ARD	AFDL/ARD
ARDC	AFDL ¹
AFD	AFDL
YFD	AFDM and YFD

Design: All U.S. Navy floating dry docks are open-ended, through-type docks, except for the ARD series. The ARDs are distinctive in being closed at one end by a ship-shaped bow.²

The large ABSD/AFDB-series docks are sectional, to facilitate disassembly and towing. Mounted on their hull sections—which are called “pontoon”—are side or “wing” walls that fold down for storage or towing. These wing walls can be shifted easily between pontoons in the event of damage.

¹ Initially, these were referred to as AFDL/C's.

² The ARD-type docks also are referred to as Camel docks, for a ship of that name that was gutted and fitted with a stern gate in 1700 to serve as a dock at the Russian harbor of Kronstadt (near St. Petersburg/Leningrad). The project was undertaken by a captain in the Royal Navy because of the lack of docking facilities at Kronstadt, which is now a major Russian naval base.

The lift capacities listed in this chapter are nominal; much heavier ships can be lifted if the distribution of ship weight is favorable.

Guns: No floating dry docks are armed, although some originally were fitted to mount light anti-aircraft guns.

Names: Floating dry docks were unnamed until the 1960s. Dry docks that service nuclear-propelled submarines have been given the names of towns and cities associated with nuclear power; most of the others that are named have positive trait names.

Operational: Operational docks are manned by Navy personnel.

LARGE AUXILIARY FLOATING DRY DOCKS

Seven of the floating dry docks in this category (AFDB 1-7) were built during World War II; the AFDB 8 and 9 were acquired much later.

The ABSD 1-7 (later changed to AFDB 1-7) were intended to be towed in sections to advance bases to be assembled and then to service the Navy's largest warships. The ABSD 1 and ABSD 2 were the largest, being ten-section docks intended to lift battleships of the Iowa (BB 61) class and aircraft carriers of the Midway (CVB 41) class; the ABSD 3 had nine sections, and the others were seven-section docks. The ABSD 1 was completed in 1943, the ABSD 2-6 in 1944, and the ABSD 7 in 1945. A planned eighth ABSD was canceled.

The following notes refer to the AFDB 1-7:

Classification: These docks originally were designated ABSD with the same hull numbers; they were reclassified AFDB in August 1946.

Design: All feature steel construction. The large wing walls can support cranes and, as built, anti-aircraft (AA) guns (authorized armament when built was a twin 40-mm Bofors AA mount on each section).

The ABSD 1-3 had the capacity to lift any World War II-era U.S. warship; the ABSD 4-7 could lift Iowa-class battleships and Essex (CV 9)-class aircraft carriers.

Dock	Sections	Lift capacity
ABSD 1, 2	10	90,000 tons
ABSD 3	9	81,000 tons
ABSD 4-7	7	55,000 tons

The following characteristics apply to standard dock sections:

Displacement:	15,400 tons
Length:	approx. 93 feet (28.35 m) overall approx. 82½ feet (25.15 m) on pontoon
Beam:	256 feet (78.05)
Width clear inside:	133½ feet (40.73 m)
Draft:	9 feet (2.74 m) light surface 68 feet (23.78 m) max submerged

Names: Names were assigned to two of these docks in the 1960s: AFDB 1 became the ARTISAN and AFDB 7 the LOS ALAMOS.

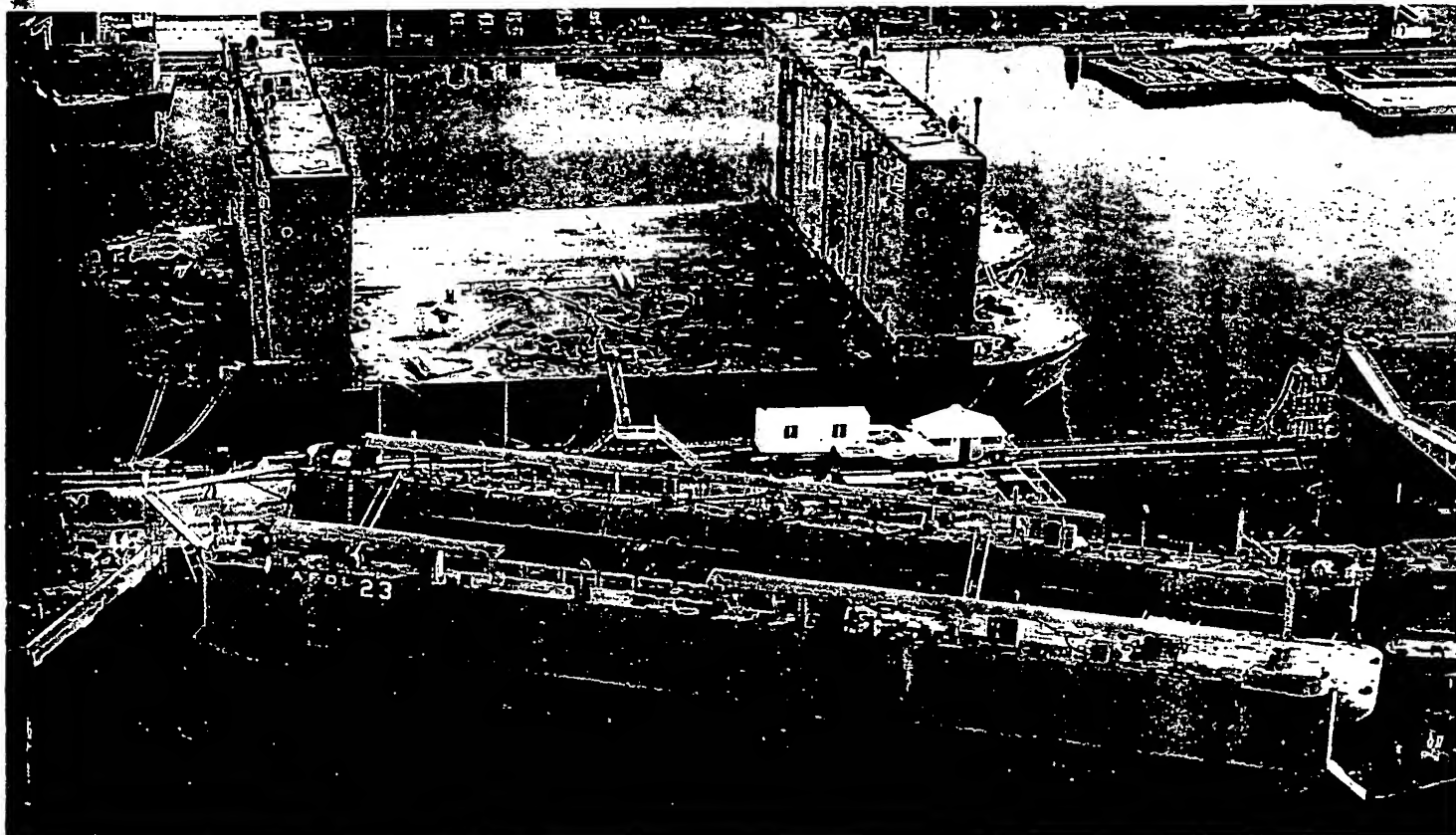
Operational: AFDB 7 sections A-B-C-D were reactivated from the reserve fleet in 1961 and towed across the Atlantic in February-March 1961 for use at the Holy Loch (Scotland) SSBN refit base. AFDB 7 sections were in use at Holy Loch for 30 years, until the forward base there was disestablished in 1992.

AFDB 9

The unnamed AFDB 9 is a civilian-built, two-section dock acquired by the Navy in 1974. She has been on commercial lease since 14 June 1993, operated by Metro Machine Corp. in Norfolk, Virginia.

The AFDB 9 was taken over by the Navy and placed on the NVR effective 12 July 1990. The dock had been operated by Pennsylvania Shipbuilding Co. and was acquired by the Navy when that firm defaulted on Navy contracts.

See 16th Edition/page 327 for characteristics.



Two sections of an AFDB (top) and the ADEPT (foreground) at Subic Bay, Philippines. The wing walls of the AFDBs fold down for towing and storage.